

Title: Debuting Single Digit by Double Digit Multiplication**Brief Overview:**

This lesson introduces the concept of two-digit by one-digit multiplication. It is expected that students are familiar with basic multiplication facts. During this lesson students will help the teacher plan a movie premiere for their class. Students will learn several methods for two-digit by one-digit multiplication; including using place value blocks, the draw-it strategy, the box method and decomposition.

NCTM Content Standard:

- Develop fluency in adding, subtracting, multiplying, and dividing whole numbers
- Understand the effects of multiplying and dividing whole numbers

Grade/Level:

Grade 3/4

Duration/Length:

3 sessions, for 60 minutes a session

Student Outcomes:

Students will:

- Find the product of two-digit by one-digit numbers by using base ten blocks.
- Multiply one-digit whole numbers by multiples of ten in the range of 10-90 using strategies based on place value, and decomposition.

Materials and Resources:

Day 1

- Student resource "Movie Ticket"
- Teacher resource "Movie Ticket" answer key
- Student resource "Invitation"
- Teacher resource "Invitation" sample
- Student resource "Reel Warm Up - chairs"
- Teacher resource "Reel Warm Up - chairs" answer key
- Teacher resource "Swag Bags"
- 2 bags of teacher choice (ex, two brown paper bags)
- Teacher resource "Swag Bag Numbers"
- Place value / Base ten blocks
- Teacher resource "Sample Grid"

- Masking tape grids on bulletin board paper, desks, or floor (for teacher and each group of students)
- Student resource “Draw It”
- Teacher resource “Draw It” answer key
- Student resource “Comfy Chair, Inc.”
- Teacher resource “Comfy Chair, Inc.” answer key
- Student resource “Movie Exit Ticket-day 1”
- Teacher resource “Movie Exit Ticket” answer key

Day 2

- Student resource “Reel Warm Up - necklaces”
- Teacher resource “Reel Warm Up - necklaces” answer key
- Student resource “Necklace” (Choose either the black & white or color copy.)
- Place value/ Base ten blocks
- Student resource “Jeweler to the Stars Order Form”
- Teacher resource “Jeweler to the Stars Order Form” answer key
- Student resource “Mega Celebrity Bling”
- Teacher resource “Mega Celebrity Bling” answer key
- Student resource “Movie Exit Ticket-day 2”
- Teacher resource, “Movie Exit Ticket” answer key

Day 3

- Red Carpet (Bulletin board paper, wrapping paper, etc.)
- Student resource “Reel Warm Up - Red Carpet Day”
- Teacher resource “Reel Warm Up – Red Carpet Day” answer key
- Student resource “Jet’s Tinseltown Transport Services”
- Teacher resource “Jet’s Tinseltown Transport Services” answer key
- Student resource “Tony’s Tinseltown Transport Services”
- Teacher resource “Tony’s Tinseltown Transport Services” answer key
- Student resource “Carmella’s Tinseltown Transport Services”
- Teacher resource “Carmella’s Tinseltown Transport Services” answer key
- Swag bags from day1
- Place value/Base ten blocks
- Student resource “Movie Ticket”
- Teacher resource “Movie Ticket” answer key
- Student resource “T.T.T. For Extra Large Parties”
- Teacher resource “T.T.T. For Extra Large Parties” answer key
- Student resource “Summative Assessment”
- Teacher resource “Summative Assessment” answer key

Development/Procedures:

Day 1

Pre-assessment

- Give each student the student resource “Movie Ticket” with the following word problem. Say: “Tra la la! It is movie night. The theater has 58 rows of seats. Each row has 8 seats. How many seats are in the theater?” Remind students to show their work using pictures and/or numbers. Allow students 3-5 minutes to complete the task.
- Collect the movie tickets from the students to evaluate their methods for solving the word problem. See teacher resource “Movie Ticket Answer Key.”

Engagement

- Using teacher resource “Invitation,” read aloud the invitation from the movie director. Distribute invitations to each student. Explain to the students that in order to attend the movie premiere they must have their teacher’s initials in each of the three stars at the bottom of their invitations. Decide and plan how you would like to hold the class movie premiere (i.e. show a movie for a short period, bring in popcorn, allow students to wear sunglasses as movie stars attending the premiere) at the end of the unit. See the sample invitation on teacher resource “Movie Ticket Answer Key.”

Exploration

- Distribute student resource “Reel Warm Up-Chairs” to the students. Allow students to discuss. Have groups share ideas with the class. See teacher resource “Reel Warm-Up Chairs Answer Key.”

Explanation

- Say: Today we will explore how to multiply double digit numbers by single digit numbers to determine the number of chairs needed for our movie premiere.
- Prepare Swag Bags before the lesson by attaching teacher resource “Swag Bags” to two bags of your choice. Show the already prepared “Swag Bags.” One swag bag contains cards with double digit numbers from teacher resource “Swag Bag Numbers” from 10-60. The other swag bag contains numbers 1-9 (teacher resource “Swag Bag” with one star). Ask one student to pull a card from the double digit swag bag and one card from the single digit swag bag.
- Write the numbers the students selected from the two Swag Bags on the board. Explain that today the class will use base ten blocks to help them find the product.
- Ask students to represent each number using base ten blocks. Put masking tape on floor, desk or draw an upside down L on the overhead. Refer to teacher resource “Sample Grid.” Show double digit number in place value blocks across the top of the upside down upper case L. Represent the single digit number along the left hand side of the upside down L using place value blocks. Model completing the intersections inside the grid. Show groups of place value blocks by multiplying

the single digit on the left hand side of the upside down L by the digit in the tens place across the top of the upside down L. The example shows 5×65 . The left hand side of the grid has 5 unit cubes going down the vertically. You are multiplying the first ones unit on the left by the first tens unit on the top. Then move along multiplying that first ones unit by each of the successive units along the top (1×10 six times and 1×1 five times). Then move on to the second ones unit along the vertical left axis. Repeat for the remaining ones units. Remember to refer to the teacher resource “Sample Grid” to see a completed example.

- Repeat the above process 2-3 more times as needed using numbers selected from the Swag Bags.

Application

- Break students into groups of 3-4. Give each group a prepared bag of base ten blocks, and bulletin board paper marked with an upside down masking tape “L”. Pull one double digit and one single digit number from the Swag Bag. Challenge students to represent and find the product while using place value blocks. Repeat about 3 times.
- Circulate while students are working in groups to see if students need additional practice with base ten blocks. Determine each student’s readiness for the paper and pencil method.

Explanation

- Demonstrate how to draw a representation of base ten blocks for the students. Pull another double digit and single digit from the swag bag. Instead of placing base ten blocks to represent numbers, draw a longer straight line to represent tens and a shorter line to represent ones inside of the upside down L. See student resource “Draw It.”
- Repeats modeling for the class as needed. See teacher resource “Draw It Answer Key.”

Application

- Give student resource “Draw It” to practice drawing base ten blocks in the upside down L chart to solve double digit by single digit multiplication problems. Allow students to work cooperatively or independently. Make anecdotal notes as you observe students working.

Differentiation

Reteach

Have a small group of students practice double digit by single digit multiplication using smaller numbers (10-20). Provide students with bags of manipulatives used previously in the lesson. Also provide students with place value mats (if available) or use masking taped bulletin board paper. Guide students with replacing place value blocks to solve multiplication problems.

Enrich

Provide students with student resource “Comfy Chair Inc.” to use the drawing method to solve three digit by one digit multiplication problems.

Assessment

Provide students with student resource “Movie Exit Ticket-day 1.” As students complete the exit ticket independently, monitor students’ use of different strategies. Note students who need reteaching. As you walk around the classroom, sign your initials in the first star of the movie premiere invitation giving students positive feedback for successfully using strategies from the lesson. Have students summarize the strategies they used today to help them determine the total number of chairs needed for their movie premiere. Prompt students as necessary to recall that they used both place value blocks and picture representation of place value blocks. Ask students how they might use these skills in their daily life? See “Exit Ticket Answer Key” to assess students’ progress.

Day 2

Engagement

- Distribute student resource “The Reel Warm Up-Necklaces.” Read aloud to students the director’s dilemma found on this resource. Say: “The director hired me to create 8 necklaces for her guests at the movie premiere. Each necklace needed to have 10 jewels. When I went to the store I bought 50 jewels. When I got home I realized I couldn’t complete my necklaces for the director. Help me determine the error that I made.” Allow students time to try solving the problem and discuss the strategies used. An answer key can be found at the bottom of the “Exit Ticket Answer Key.”

Exploration

- Give each group of 3-4 students student resource, “Necklace.” Students calculate the number of jewels that would be needed to make “X” necklaces with “X” jewels on each necklace. On the student resource 10 jewels are pictured in either black and white or color. Change the number of jewels or necklaces on the student resource by filling in the blank lines and drawing more jewels if needed.
- Remind students of strategies they used yesterday to multiply single by double digit numbers.
- Monitor strategies used to solve problem.
- Asks groups to share the strategy they used.

Explanation

- Say: We need to determine the number of jewels needed to make necklaces for 14 people with 10 jewels on each necklace.
- Using the upside down L from the previous day’s lesson display 14 ones and discuss with students what these ones represent (14 people you are making necklaces for). Create a list of multiplication facts that you represent with base ten blocks. Start with 14×1 to represent 14 movie stars each receiving 1 necklace.

- Ask students what exchange they could make for the 14 ones if each person needs to have 10 jewels on their necklace and we want to know how many jewels we need.
- Replace each unit with a tens block to represent the 10 jewels on each of the fourteen movie stars' necklaces. Add to your list of multiplication facts $14 \times 10 = 140$, to represent 14 movie stars receiving 10 jewels on their necklaces.
- Ask students what they could do if each movie star changed his /her mind and now wanted 20 jewels on their necklace. (Add another tens block above each tens block to represent ten more jewels on each necklace). Ask students to describe the relationship between 10 and 20? (20 is double 10). Show students using manipulatives how to add base ten blocks. Count base ten blocks aloud with students to find out how many jewels are now needed. Add to your list of multiplication facts $14 \times 20 = 280$. Discuss how 140 has doubled and is now 280.
- Repeat with 19×1 , 19×10 , 19×20 .
- Then ask students how would you determine the number of jewels that would be needed for 3 movie stars who want 20 jewels on their necklaces. Using manipulatives on the upside down L how to use three groups of 2 tens blocks to find how many jewels are needed. Show on multiplication list 3 necklaces \times 20 jewels = 60 jewels.
- Place students in groups of 3-4. Distribute to each group of students a bag of base ten blocks.
- Ask students to determine the number of jewels that would be needed to make three necklaces with forty jewels?
- Practice with more problems as needed.

Application

- Distribute manipulatives that students may use to complete independent work
- Distribute student resource "Jeweler to the Stars Order Form."
- Students calculate the number of jewels needed for necklace orders. Students may work in pairs or independently.
- Monitor students' work and note any students who may need additional help during reteaching. See answer key for assessments.

Differentiation

Reteach

Guide students in multiplying lower numbers (1-19) by 10. Students may use base ten blocks or the drawing method to represent the numbers given.

Enrich

Provide student resource, "Mega Celebrity Bling." Students will use double digit multiplication or double digit numbers multiplied by 100 to compute large numbers of jewels needed for Mega Celebrities. An answer key is provided.

Assessment

Distribute student resource "Movie Exit Ticket-Day 2." Allow students time to complete the exit ticket independently. Monitor students while working and take notes as to who

may need further reteaching. As students complete the exit tickets also sign the second star on the movie premiere invitations that were distributed on the first day. See answer key to assess students' work.

Day 3

Engagement

- Roll out a red carpet (using red bulletin board paper, gift wrap etc.) to set the stage.
- Distribute student resource "Reel Warm Up-Red Carpet Day" and read aloud to the students. Say: "Hollywood Carpet Creations is having some trouble because their computers crashed. They need assistance with computing a receipt for their client. However, their multiplication skills have grown a bit rusty. Help them determine how much a carpet would cost to rent if the length of the carpet is 74 feet and it costs \$5 per foot?"

Exploration

- Say: "Beside needing chairs, red carpets, and necklaces, the director also needs transportation for his guests to the premiere."
- Today we will use another strategy to multiply two digit by single digit numbers.
- Distribute student resource "Jet's Tinseltown Transport Services."
- Divide students into groups of 3-4. Ask students to calculate how much it would cost for 8 people to travel by personal jet to the movie premiere if it costs \$45 per person for a seat on the plane.
- Allow students time to complete in groups as you monitor the class to see what strategies students use.
- Ask a few groups to share how they solved the problem with the class. See answer key to assess students' progress.

Explanation

- Tell students that they have used base ten blocks and drawing base ten blocks to help solve two digit by one digit multiplication problems. Today they will learn another strategy, the *Box Method*.
- Distribute student resource "Tony's Tinseltown Transport Services Worksheet" to each student.
- Solve the first problem using the think aloud strategy. Say: "If 9 people travel by limo and it costs \$45 per person you can find the total cost by using the *Box Method*. Draw a square with a vertical line down the center dividing the square into 2 rectangles. Decompose 45 into 40 tens and 5 ones and write the two numbers on the top of each half of the square. Write 9 on the horizontal left side of the box. Then inside the box show how to multiply 40 tens by 9 ones = 360 in the left side of the box. Then show how to multiply 5 ones by 9 ones in the right side of the box, $9 \times 5 = 45$. Add the partial products $360 + 45 = 405$. Remind students that they are solving for cost so it's not 405, but \$405.

- Repeat the process with station wagon, Fast Cat, and Kimmer problems as necessary. After all problems have been completed using the *Box Method* then go back through the problems to demonstrate the decomposition method.
- Show students how to break apart the station wagon problem 32×5 into $30 \times 5 = 150$ and $2 \times 5 = 10$. Then add $150 + 10 = 160$.
- Repeat showing decomposition method for limo, Fast Cat, and station wagon problem as necessary. An answer key is provided,

Application

- Allow students to work with partners to complete student resource “Carmella’s Tinseltown Transport Services” using both box and decomposition strategies. An answer key is provided.
- If appropriate, have students work as partners alternating using each method. For example, one student demonstrates the *Box Method* and the other student demonstrates the decomposition method on problem one. On the next question students reverse roles, in order to expose both students to both methods.
- Circulate to identify which students may need additional practice.

Differentiation

Reteach

Instruct a small group using the box method. Draw numbers from the Swag Bag used on day one lesson. Provide each student with base ten blocks to put in boxes to represent partial products.

Enrich

Tell students that the limo company has some larger parties renting limos. Say: They need help calculating the bills for renting these larger limos. Distribute student resource, “T.T.T. (For Extra Large Parties)” to complete independently or with a partner. See answer key for assessment.

Summative Assessment:

Distribute student resource, summative assessment. The students will solve real world word problems using strategies they learned to multiply two-digits by one-digit. The students will answer a BCR based on their knowledge of two-digit by one-digit multiplication. An answer key is provided for this assessment.

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Movie Ticket



Name _____ Date _____

Tra la la! It is movie night. The theater has 58 rows of seats. Each row has 8 seats.

How many seats are in the theater?



Movie Ticket



Name _____ Date _____

Tra la la! It is movie night. The theater has 58 rows of seats. Each row has 8 seats.

How many seats are in the theater?



Movie Ticket Answer Key



Name **Pre-Assessment**

Date **Day 1**

Tra la la! It is movie night. The theater has 58 rows of seats. Each row has 8 seats.

How many seats are in the theater?



$$58 \times 8 = 464$$



SAMPLE INVITATION - Day 1 – teacher adds initials to one star each day



Invitation

You are invited to the premiere of the movie,

Mrs. Sansone's Class Hits Hollywood!

Where: Richard Henry Lee Elementary's Luxurious Outdoor Theater

When: Friday, March 14th, 2:00 p.m.

Cost: You are helping to plan the premiere

Your teacher will initial one star each day. You need all three stars initialed to attend the premiere.





Invitation

You are invited to the premiere of the movie.

Where:

When:

Cost: You are helping to plan the premier.

Your teacher will initial one star each day. You need all three stars initialed to attend the premiere.



Invitation

You are invited to the premiere of the movie.

Where:

When:

Cost: You are helping to plan the premier.

Your teacher will initial one star each day. You need all three stars initialed to attend the premiere.

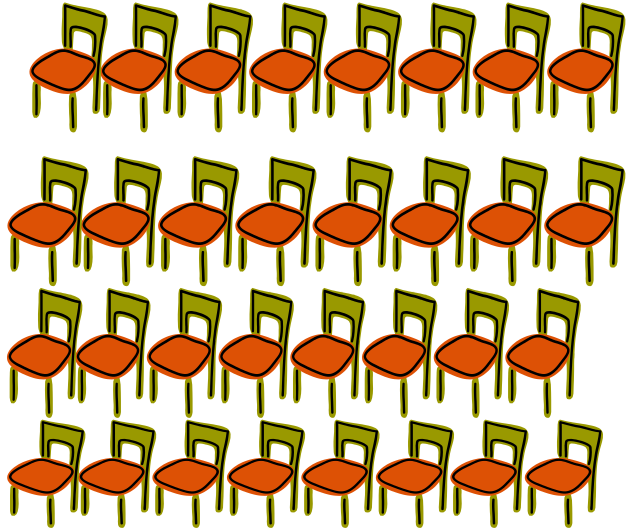
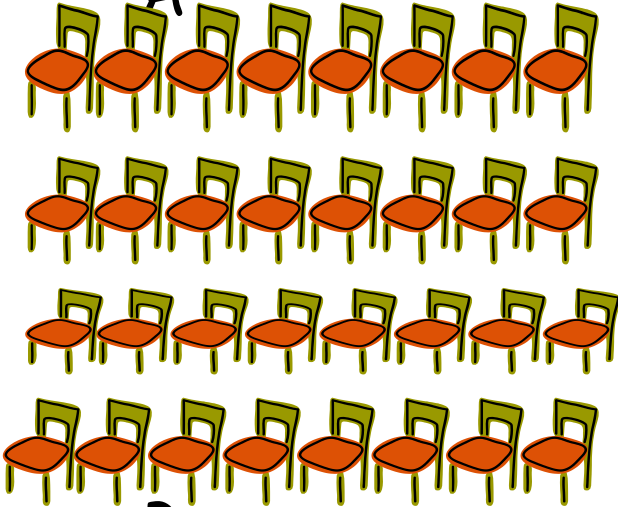


The Reel Warm Up - Chairs

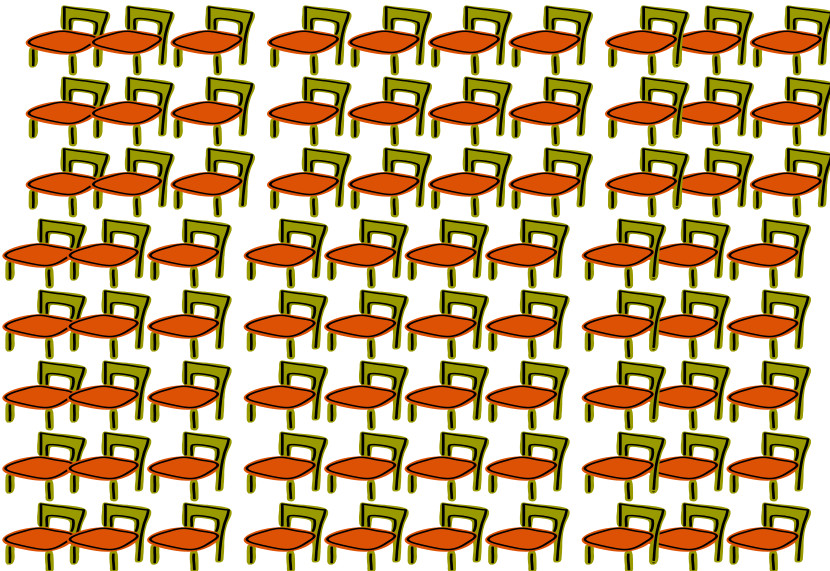
Name _____ Date _____

Which picture shows 80 seats? How can you tell?

A



B



The Reel Warm Up - Chairs

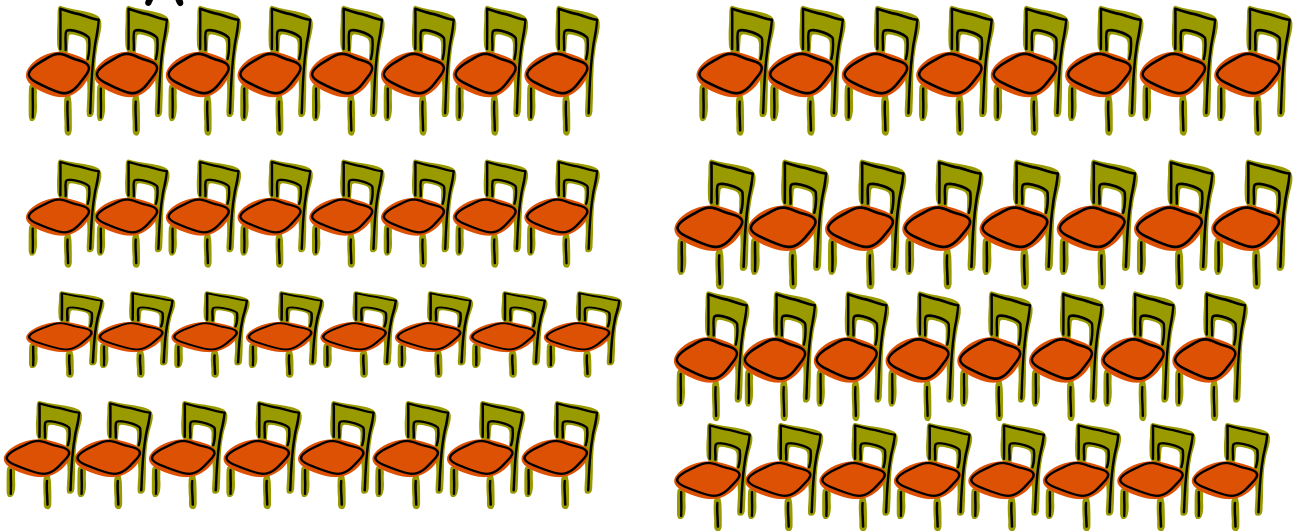
Name _____

Answer Key

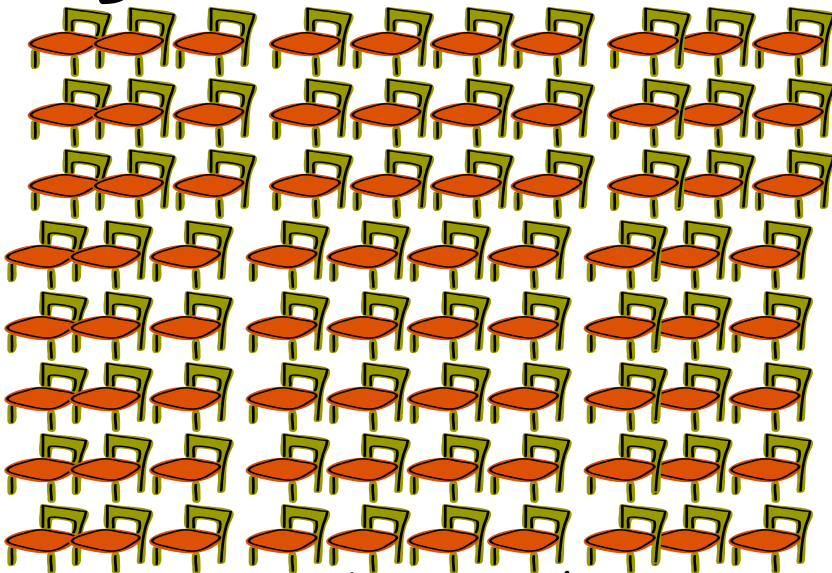
Date **Day 1**

Which picture shows 80 seats? How can you tell?

A



B



Answer: B because there are 8 rows of 10 chairs or any other acceptable explanation.

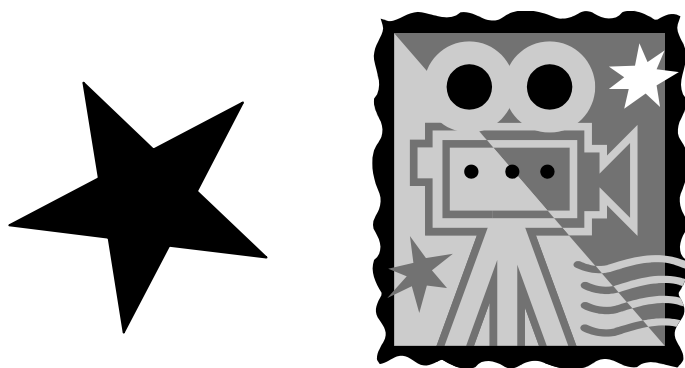
Swag Bag Labels

Cut these out and staple them to the bags.

Double digit label:



The Swag Bag



Single digit bag label

Swag Bag Numbers

Single digit numbers go in the bag with 1 star. Double digit numbers go in the bag with 2 stars.

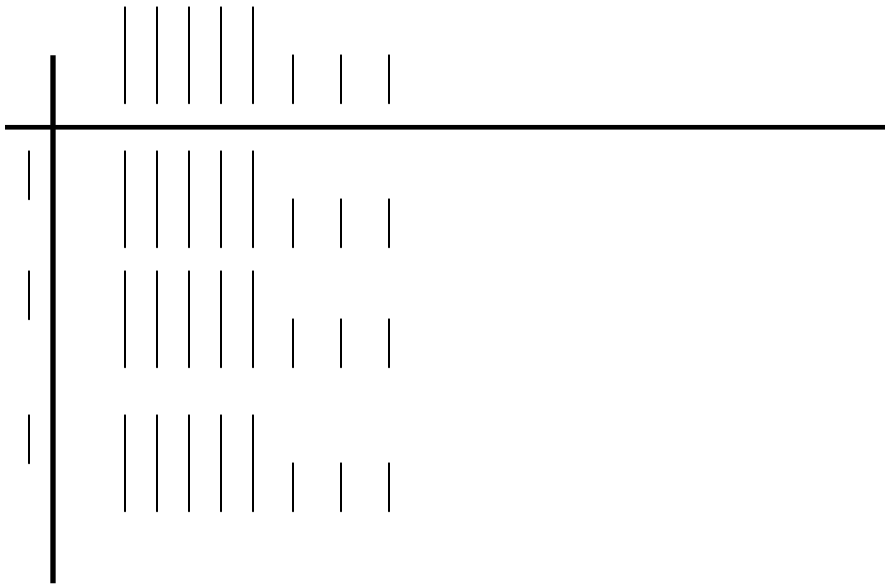
1	2	3	4
5	6	7	8
9	12	18	24
32	45	51	27
34	40	60	

Draw it!

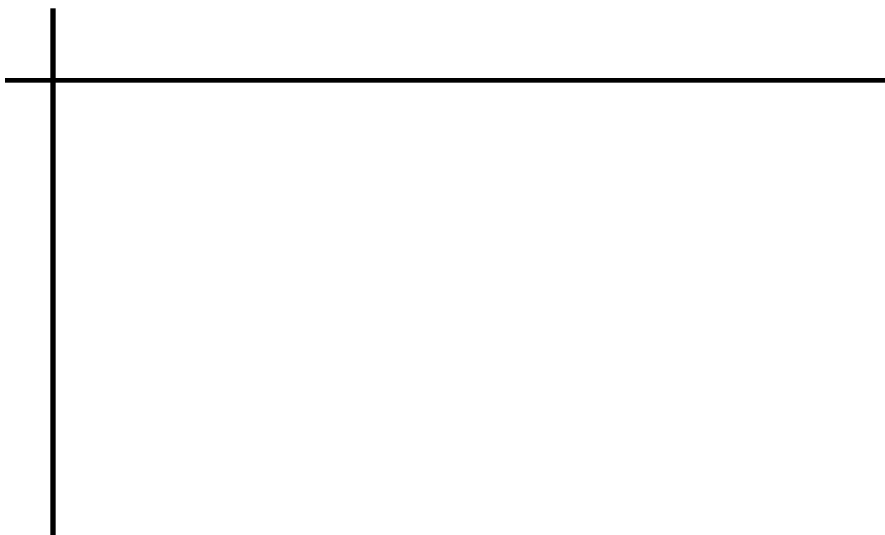
Name _____ Date _____

Use a long vertical line to represent the tens and a small line or a square to represent the ones/unit block.

$$53 \times 3$$



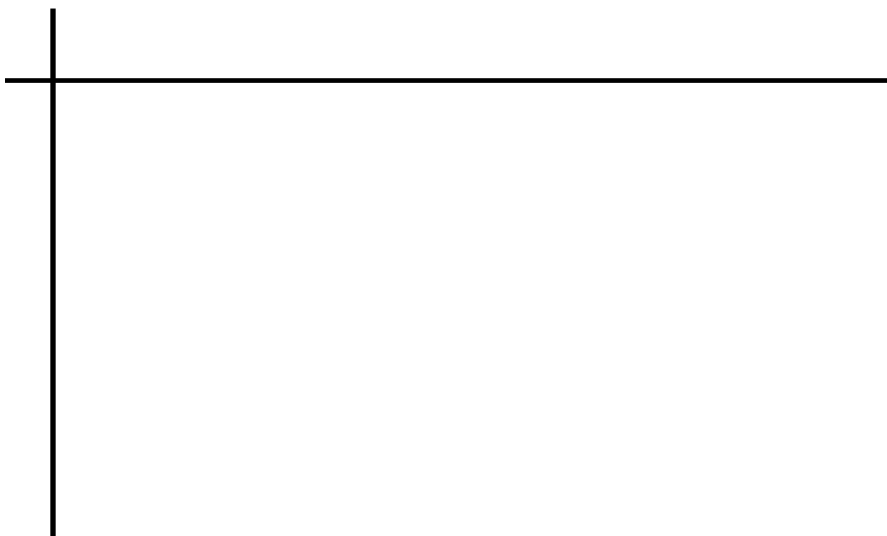
$$23 \times 4$$



$$34 \times 6$$



$$45 \times 4$$





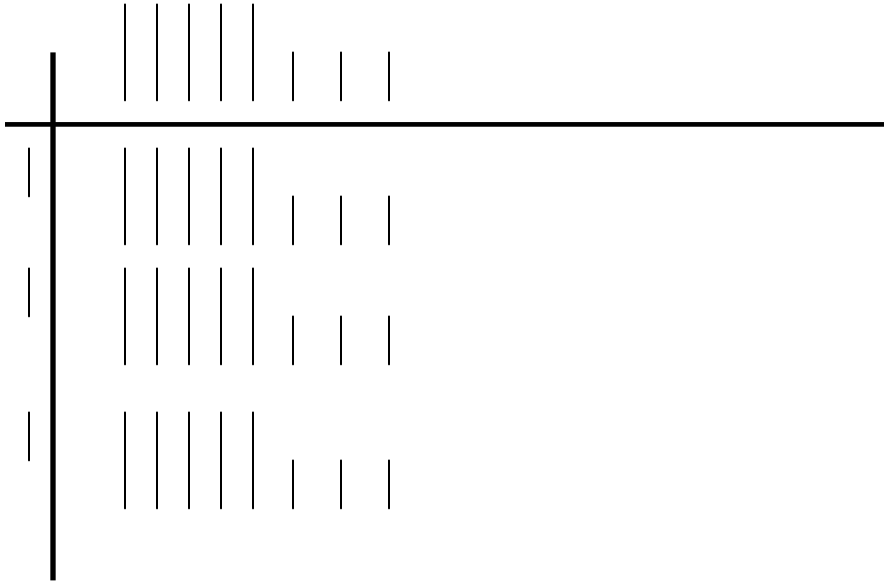
Draw it!

Name **Answer Key for Application**

Date **Day 1**

Use a long vertical line to represent the tens and a small line or a square to represent the ones/unit block.

$$53 \times 3$$



$$23 \times 4$$

$$23 \times 4 = 92$$

$$34 \times 6$$

$$34 \times 6 = 204$$

$$45 \times 4$$

$$45 \times 4 = 180$$

Name: _____ Date: _____

Comfy Chair Company, Inc.

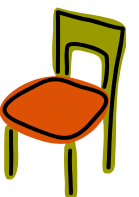


Directions: The Comfy Chair Company needs your help! They need to know how many chairs are needed for the following orders. Use the upside down L from class today to help you complete the order form. Use a square to represent the 100 block.

1. Director Dave needs 130 rows of 9 chairs. How many chairs does he need to order?

2. Director Darla needs 122 rows of 8 chairs. How many chairs does she need to order?

3. Director Duffy needs 145 rows of 7 chairs. How many chairs does he need to order?

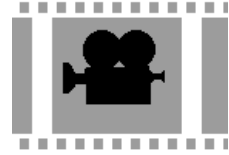


4. Director Delaun needs 231 rows of 4 chairs. How many chairs does he need to order?



5. Director Dineen needs 402 rows of 4 chairs. How many chairs does she need to order?

6. Write your own problem for a friend to solve. You should solve it on notebook paper to create an answer key.



Directions: The Comfy Chair Company needs your help! They need to know how many chairs are needed for the following orders. Use the upside down L from class today to help you complete the order form. Use a square to represent the 100 block.

1. Director Dave needs 130 rows of 9 chairs. How many chairs does he need to order?

$$130 \times 9 = 1,170$$

2. Director Darla needs 122 rows of 8 chairs. How many chairs does she need to order?

$$122 \times 8 = 976$$

3. Director Duffy needs 145 rows of 7 chairs. How many chairs does he need to order?

$$145 \times 7 = 1,015$$



4. Director Delaun needs 231 rows of 4 chairs. How many chairs does he need to order?

$$231 \times 4 = 924$$



5. Director Dineen needs 402 rows of 4 chairs. How many chairs does she need to order?

$$402 \times 4 = 1,608$$



6 Write your own problem for a friend to solve. You should solve it on notebook paper to create an answer key.

Answers will vary.

Exit Ticket

Day One



Name _____ Date _____

You are having a private showing of the movie for 50 family and friends. If you set up 3 rows of 18 chairs will you have enough chairs for all your guests? Explain your answer.



Exit Ticket

Day One



Name _____ Date _____

You are having a private showing of the movie for 50 family and friends. If you set up 3 rows of 18 chairs will you have enough chairs for all your guests? Explain your answer.



Exit Ticket



Name **Answer Key** Date **Day One**

You are having a private showing of the movie for 50 family and friends. If you set up 3 rows of 18 chairs will you have enough chairs for all your guests? Explain your answer.

$$18 \times 3 = 54 \text{ chairs}$$





The Reel Warm Up-necklaces

Name **Answer Key** Date **Day Two**

The director hired me to create 8 necklaces for her guests at the movie premiere. Each necklace needed to have 10 jewels. I went to the store and I bought 50 jewels. When I got home I realized I couldn't complete my necklaces for the director. Today help me find out where I went wrong.

8 necklaces x 10 jewels = 80 jewels needed

Only bought 50 jewels so still need 30 more jewels.



The Reel Warm Up - Necklaces

The director hired me to create 8 necklaces for her guests at the movie premiere. Each necklace needed to have 10 jewels. I went to the store and I bought 50 jewels. When I got home I realized I couldn't complete my necklaces for the director. Help me determine the error that I made.

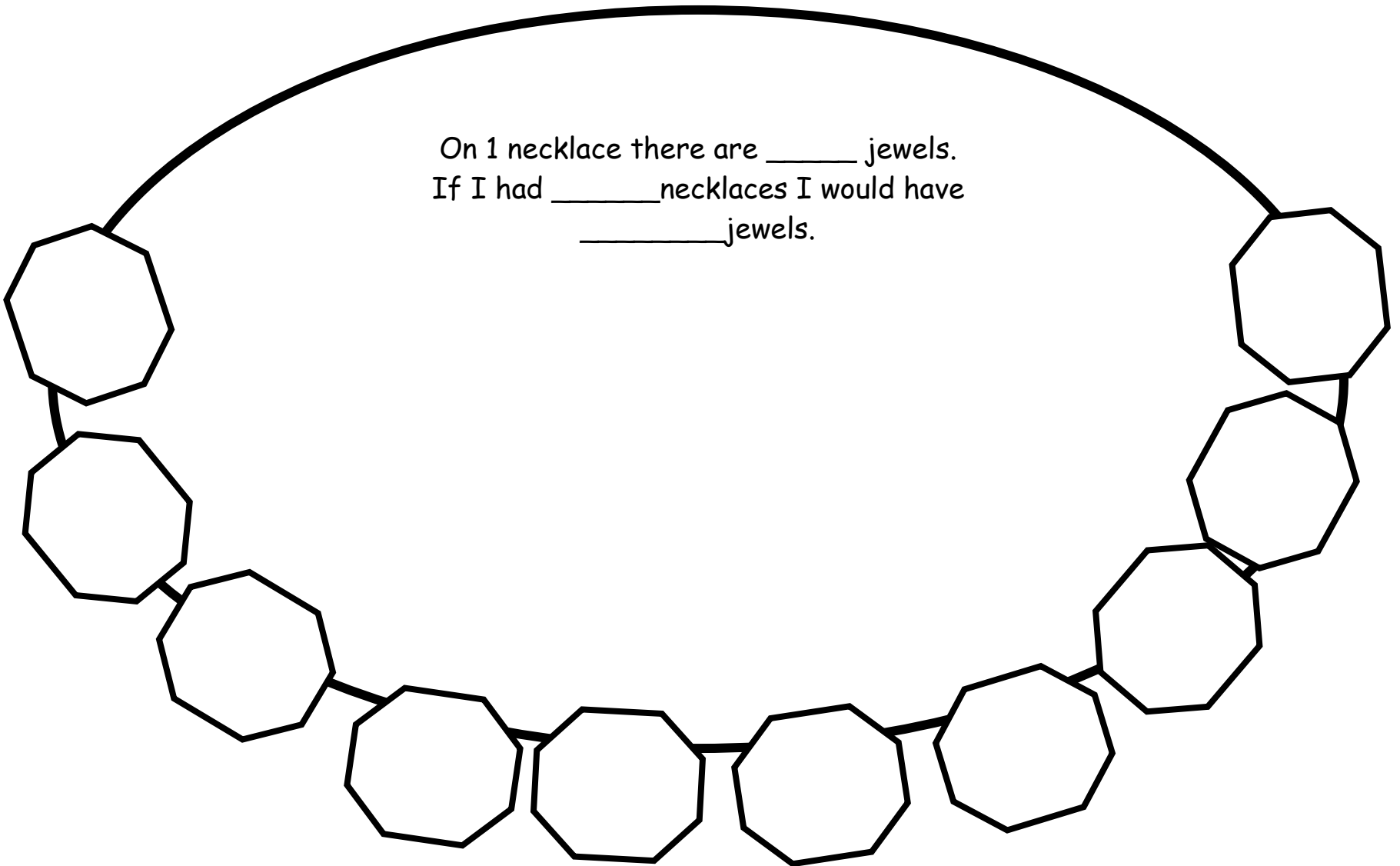


The Reel Warm Up- necklaces

The director hired me to create 8 necklaces for her guests at the movie premiere. Each necklace needed to have 10 jewels. I went to the store and I bought 50 jewels. When I got home I realized I couldn't complete my necklaces for the director. Help me determine the error that I made.

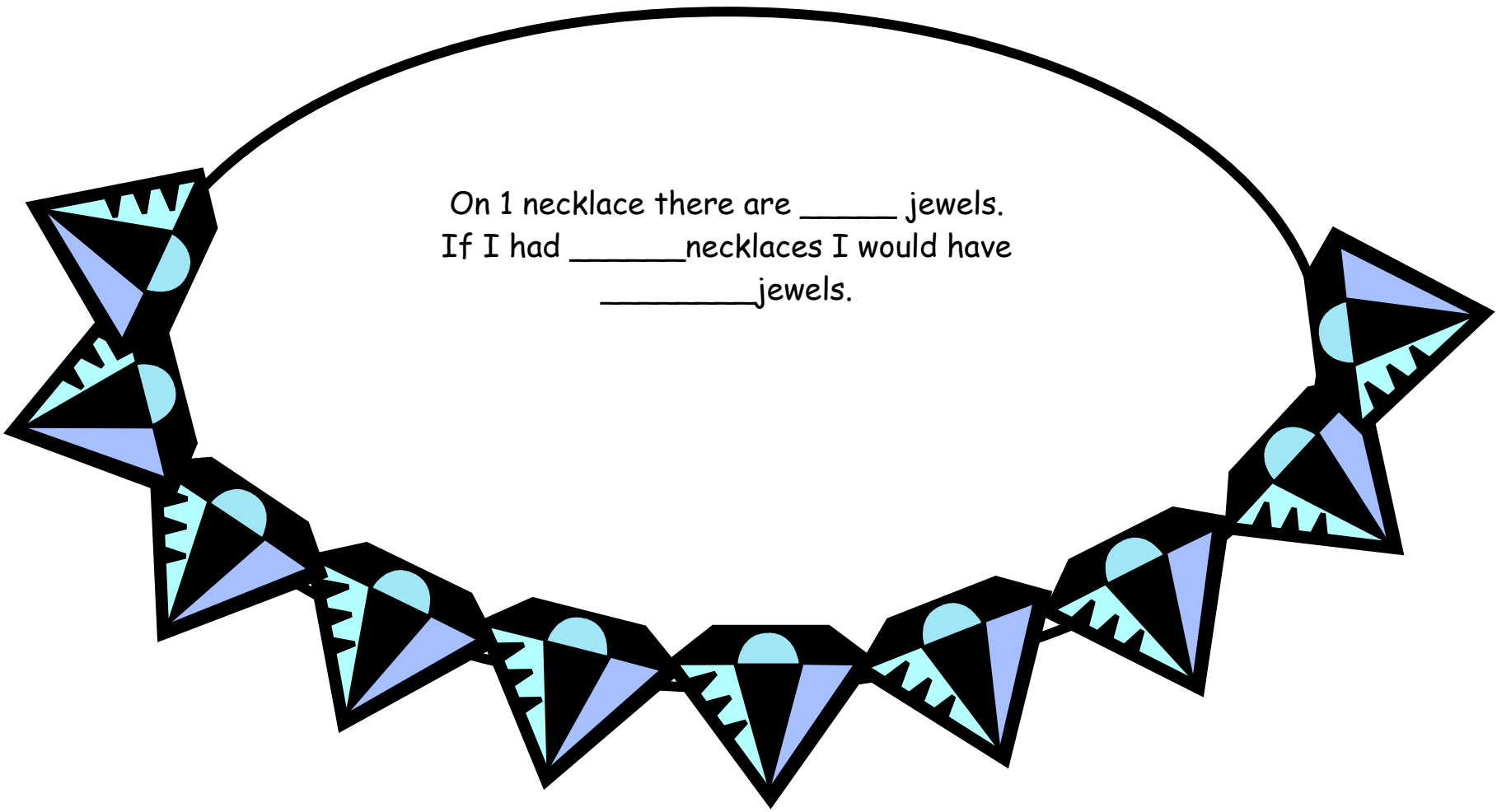
Necklaces

On 1 necklace there are _____ jewels.
If I had _____ necklaces I would have
_____ jewels.



Necklaces

On 1 necklace there are _____ jewels.
If I had _____ necklaces I would have
_____ jewels.



Name: _____ Date: _____

Jeweler to the Stars Order Form



1. Holly Wood wants 16 necklaces with 10 jewels each. How many jewels does she need to order?

2. Michael Famous wants 18 necklaces with 20 jewels each. How many jewels does he need to order?

3. Alesha Star wants 20 jewels on each of her necklaces. She is buying 4 necklaces. How many jewels does she need to order?

4. At a Jeremiah Beeper concert, Jeremiah threw necklaces into the crowd. Each necklace had 30 beads. He threw 16 necklaces into the crowd. Unfortunately, every necklace broke and all the beads scattered onto the floor. How many beads were now lying on the ground?

Jeweler to the Stars Order Form p. 2

5. Photo Dakota is having a necklace made for all 35 people who work in her office. She wants 10 jewels on each necklace. How many jewels does she need to order?
6. Ms. Dakota changed her mind. Now she wants to double the number of jewels on each necklace. How many jewels should she order now?
7. Write your own story for a friend to solve. There must be a multiple of 10 jewels on each necklace. Solve the problem on a piece of notebook paper to create an answer key.

Name **Answer Key**

Date: **Application Day 2**

Jeweler to the Stars Order Form



1. Holly Wood wants 16 necklaces with 10 jewels each. How many jewels does she need to order? **$16 \times 10 = 160$**

2. Michael Famous wants 18 necklaces with 20 jewels each. How many jewels does he need to order? **$18 \times 20 = 360$**

3. Alesha Star wants 20 jewels on each of her necklaces. She is buying 4 necklaces. How many jewels does she need to order? **$20 \times 4 = 80$**

4. At a Jeremiah Beeper concert, Jeremiah threw necklaces into the crowd. Each necklace had 30 beads. He threw 16 necklaces into the crowd. Unfortunately, every necklace broke and all the beads scattered onto the floor. How many beads were now lying on the ground? **$30 \times 16 = 480$**

5. Phota Dakota is having a necklace made for all 35 people who work in her office. She wants 10 jewels on each necklace. How many jewels does she need to order? **$35 \times 10 = 350$**

6. Ms. Dakota changed her mind. Now she wants to double the number of jewels on each necklace. How many jewels should she order now?
 $35 \times 20 = 700$

7. Write your own story for a friend to solve. There must be a multiple of 10 jewels on each necklace. Solve the problem on a piece of notebook paper to create an answer key.

Answers will vary

Name: _____ Date: _____

Mega Celebrity Bling



1. Celeb Britty was preparing for the Oscars. She wanted to have more diamonds than all the other celebrities at the award show. She ordered 16 necklaces with 100 sparkling diamonds each. How many diamonds was Celeb Britty wearing?
2. Move E. Star, Celeb Britty's main competition, decided to wear 19 necklaces each with 20 diamonds. Who was wearing more diamonds, Celeb Britty or Move E. Star?
3. Now the ultimate celebrity, Shine N. Star, wanted to outshine everyone. She told her jeweler she only wanted to wear 12 necklaces. She wanted an equal amount of diamonds on each necklace. How many diamonds would she need to have on each necklace in order to out shine both Celeb Britty and Move E. Star?

4. Han Some walked the red carpet with his mom. He wanted to make her feel special so he bought her two different kinds of jewels for her necklaces. On each of her 12 necklaces she had 20 ruby jewels and 30 emeralds jewels. How many jewels was Hand Some's mother wearing?
5. Sleep Ping Beauty wasn't satisfied with just wearing necklaces. She also wanted to wear diamond encrusted shoes and bracelets. She wore 10 necklaces each with 12 diamonds. She wore two shoes with 420 diamonds on each. Finally, she wore 13 bracelets with 12 diamonds on each. How many diamonds did Sleep Ping Beauty wear in all to the award show?

Name: **Answer Key-Enrichment** Date: **Day Two**

Mega Celebrity Bling



1. Celeb Britty was preparing for the Oscars. She wanted to have more diamonds than all the other celebrities at the award show. She ordered 16 necklaces with 100 sparkling diamonds each. How many diamonds was Celeb Britty wearing?

$$16 \times 100 = 1,600 \text{ diamonds}$$

2. Move E. Star, Celeb Britty's main competition, decided to wear 19 necklaces each with 20 diamonds. Who was wearing more diamonds, Celeb Britty or Move E. Star?

$$19 \times 20 = 380 \text{ diamonds}$$

Celeb Britty wore more diamonds than Move E. Star.

3. Now the ultimate celebrity, Shine N. Star, wanted to outshine everyone. She told her jeweler she only wanted to wear 12 necklaces. She wanted an equal amount of diamonds on each necklace. How many diamonds would she at least need to have on each necklace in order to out shine both Celeb Britty and Move E. Star?

$$12 \times (\text{any number greater than } 133)$$

4. Han Some walked the red carpet with his mom. He wanted to make her feel special so he bought her two different kinds of jewels for her necklaces. On each of her 12 necklaces she had 20 ruby jewels and 30 emeralds jewels. How many jewels was Hand Some's mother wearing?

$$12 \times 20 = 240 \text{ rubies on necklaces}$$

$$12 \times 30 = 360 \text{ emeralds on necklaces}$$

$$600 \text{ jewels in all}$$

5. Sleep Ping Beauty wasn't satisfied with just wearing necklaces. She also wanted to wear diamond encrusted shoes and bracelets. She wore 10 necklaces each with 12 diamonds. She wore two shoes with 420 diamonds on each. Finally, she wore 13 bracelets with 12 diamonds on each. How many diamonds did Sleep Ping Beauty wear in all to the award show?

$$10 \times 12 = 120$$

$$2 \times 420 = 840$$

$$13 \times 12 = 156$$

$$120 + 840 + 156 = 1,116 \text{ diamonds in all}$$

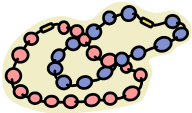
Exit Ticket

Day Two



Name _____ Date _____

If you want you want to make 7 necklaces with 40 jewels each, how many jewels would you need? Explain the strategy you used to find the answer.



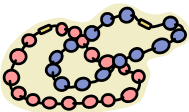
Exit Ticket

Day Two



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Exit Ticket

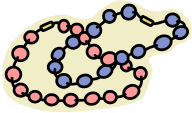


Name **Answer Key**

Date **Day Two**

If you want you want to make 7 necklaces with 40 jewels each, how many jewels would you need? Explain the strategy you used to find the answer.

$$7 \times 40 = 280$$



Red Carpet Day



The Reel Warm Up

Name **Answer Key**

Date **Day Three**

Hollywood Carpet Creations is having some trouble because their computers crashed. They need assistance with computing a receipt for their client.

However, their multiplication skills have grown a bit rusty. Help them determine how much a carpet would cost to rent if the length of the carpet is 74 feet and it costs \$5 a foot to rent the carpet.

$$74 \times 5 = \$30$$

Red Carpet Day



The Reel Warm Up

Name _____ Date _____

Hollywood Carpet Creations is having some trouble because their computers crashed. They need assistance with computing a receipt for their client. However, their multiplication skills have grown a bit rusty. Help them determine how much a carpet would cost to rent if the length of the carpet is 74 feet and it costs \$5 a foot to rent the carpet.

Red Carpet Day



The Reel Warm Up

Name _____ Date _____

Hollywood Carpet Creations is having some trouble because their computers crashed. They need assistance with computing a receipt for their client. However, their multiplication skills have grown a bit rusty. Help them determine how much a carpet would cost to rent if the length of the carpet is 74 feet and it costs \$5 a foot to rent the carpet.



Name: _____ Date: _____



Jet's Tinseltown Transport Services

How much would it cost for 8 people to travel by personal jet to the movie premiere if it costs \$45 per person for a seat on the plane?



Name: _____ Date: _____



Jet's Tinseltown Transport Services

How much would it cost for 8 people to travel by personal jet to the movie premiere if it costs \$45 per person for a seat on the plane?



Name: **Answer Key Explore**

Date: **Day Three**



Jet's Tinseltown Transport Services

How much would it cost for 8 people to travel by personal jet to the movie premiere if it costs \$45 per person for a seat on the plane?

$$8 \times \$45 = \$360$$



Tony's Tinseltown Transport Services

The Box Method – Exploration Day 3

Name _____ Date _____

Limo: \$45 an hour for 9 people

$$\$45 \times 9$$

40

5



9

$9 \times 40 =$	$9 \times 5 =$

Station wagon: \$32 an hour for 5 people

$$32 \times 5$$

30

2



5

$$32 \times 5 =$$

$$30 \times 5$$

$$\text{plus } 2 \times 5$$

Fast Cat: \$53 an hour for 4 people

$$53 \times 4$$

4

Kimmer: \$61 an hour for 6 people

$$61 \times 6$$

6

$$61 \times 6 =$$

$$60 \times 6$$

$$\text{plus } 6 \times 6$$





Tony's Tinseltown Transport Services

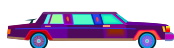
The Box Method

Name **Answer Key Exploration** Date **Day 3**

Limo: \$45 an hour for 9 people

$$\$45 \times 9$$

40 5



9

9 x 40 = 360	9 x 5 = 45
+	

\$405

5

Station wagon: \$32 an hour for 5 people

$$32 \times 5$$

30 2



$$\begin{aligned} 32 \times 5 &= \\ 30 \times 5 &= \\ + 2 \times 5 &= \end{aligned}$$

\$160

Fast Cat: \$53 an hour for 4 people

50 x 4 = 200	4 x 3 = 12
-----------------	---------------

4

50 x 4 = 200	4 x 3 = 12
+	

\$212 6

Kimmer: \$61 an hour for 6 people

60 x 6 = 360	6 x 6 = 36
-----------------	---------------

$$\begin{aligned} 61 \times 6 &= \\ 60 \times 6 &= \\ + 1 \times 6 &= \end{aligned}$$

\$366





Carmella's Tinseltown Transport Services

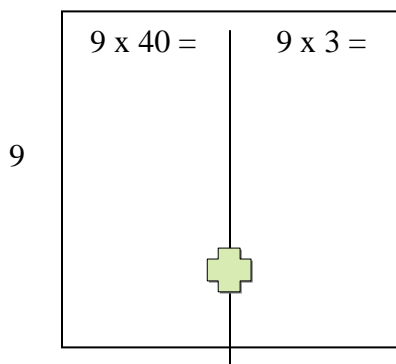
The Box Method

Name _____ Date _____

Limo: \$43 an hour for 9 people

$$43 \times 9$$

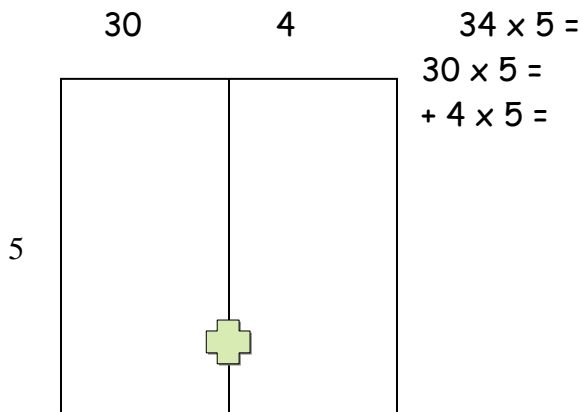
40 3



Station wagon: \$34 an hour for 5 people

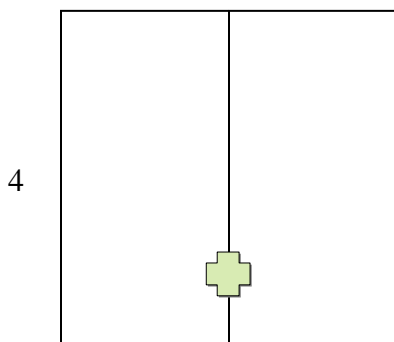
$$34 \times 5$$

30 4



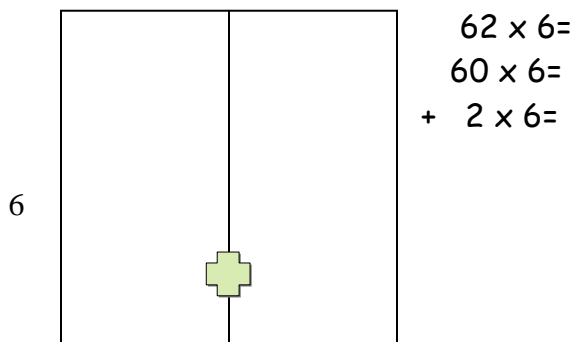
Fast Cat: \$55 an hour for 4 people

$$55 \times 4$$



Kimmer: \$62 an hour for 6 people

$$62 \times 6$$





Carmella's Tinseltown Transport Services

The Box Method

Name **Answer Key Application** Date **Day 3**

Limo: \$43 an hour for 9 people

$$43 \times 9$$

40 3

9

9 x 40 = 360	9 x 3 = 27
+	

\$387 5

Station wagon: \$34 an hour for 5 people

$$34 \times 5$$

30 4

30 x 5 = 150	4 x 5 = 20
+	

$$34 \times 5 =$$

$$30 \times 5$$

$$+ 4 \times 5$$

$$150 + 20$$

\$170

Fast Cat: \$55 an hour for 4 people

$$55 \times 4$$

4

50 x 4 = 200	5 x 4 = 20
+	

\$220 6

Kimmer: \$62 an hour for 6 people

$$62 \times 6$$

60 x 6 = 360	2 x 6 = 12
+	

$$62 \times 6 =$$

$$60 \times 6$$

$$+ 2 \times 6$$

$$360 + 12 =$$

\$372



T.T.T. For Extra Large Parties

Name: _____ Date: _____

Use the box method to help you solve the following problems.

1. Tony rents out his largest limo to a group of 28 athletes. If it costs \$54 dollars per person to ride in the limo, how much money do the athletes owe Tony's Tinseltown Transport Service?
2. To celebrate her sweet sixteen birthday, Starry Eyes, invited 36 of her closest friends to join her in her extra long hot pink stretch limo. Each friend paid \$89 dollars to ride in the limo, how much money do the girls owe Tony's Tinseltown Transport Service?
3. For their wedding Mr. and Mrs. Hollywood wanted to take their closest family and friends in a long black stretch limo. If they invited 24 family and friends and it cost \$65 per person, how much money do Mr. and Mrs. Hollywood need to pay Tony's Tinseltown Transport Service?
4. The Music Awards were coming up and Mr. Hip Hop decided to bring some of his fans in a limo to his concert. If he invited 35 fans and it cost \$47 per seat in the limo, how much money does Mr. Hip Hop owe Tony's Tinseltown Transport Service?



T.T.T. For Extra Large Parties

Name: **Answer Key**

Date: **Three**

Use the box method to help you solve the following problems.

1. Tony rents out his largest limo to a group of 28 athletes. If it costs \$54 dollars per person to ride in the limo, how much money do the athletes owe Tony's Tinseltown Transport Service?

$$28 \times \$54 = \$1,512$$

2. To celebrate her sweet sixteen birthday, Starry Eyes, invited 36 of her closest friends to join her in her extra long hot pink stretch limo. Each friend paid \$89 dollars to ride in the limo, how much money do the girls owe Tony's Tinseltown Transport Service?

$$36 \times \$89 = \$3,204$$

3. For their wedding Mr. and Mrs. Hollywood wanted to take their closest family and friends in a long black stretch limo. If they invited 24 family and friends and it cost \$65 per person, how much money do Mr. and Mrs. Hollywood need to pay Tony's Tinseltown Transport Service?

$$24 \times \$65 = \$1,560$$

4. The Music Awards were coming up and Mr. Hip Hop decided to bring some of his fans in a limo to his concert. If he invited 35 fans and it cost \$47 per seat in the limo, how much money does Mr. Hip Hop owe Tony's Tinseltown Transport Service?

$$35 \times \$47 = \$1,645$$

Summative Assessment
Lights, Camera, Click!

Name_____ Date_____



Use any of the strategies you learned this week, draw it, the box method, or decomposition to help you solve the problems. Remember to show your work!

1. As the 26 students in your class arrive to your movie premiere, each person has their picture taken 7 times on the red carpet. How many pictures of your class were taken in total?



2. Your teacher had 5 photographers take his picture. Each photographer took 23 photos of him. Your principal had 7 photographers take her picture. Each photographer took 19 pictures of her. Who had more pictures taken, your teacher or your principal?



3. Peter Paparazzi loves to take photos of celebrities. If he has space on his camera to take 200 pictures, can he take 5 pictures of each of the 24 celebrities who attend your premiere?



Name: _____ Date: _____

Brief Constructed Response

You have to rent a carpet for 5 hours. You have \$200 to spend.

Diamond Encrusted
Red Carpet
\$85 per hour

Plush Velvet
Red Carpet
\$36 per hour

Plastic
Red Carpet
\$24 per hour



Part A

Which of the red carpets above could you choose?

Part B

Use what you know about multiplication to explain why your answer is correct. Use numbers and/or words in your explanation.

Summative Assessment
Lights, Camera, Click!

Name **Answer Key**

Date **Day Three**



Use any of the strategies you learned this week, draw it, the box method, or decomposition to help you solve the problems. Remember to show your work!

3. As the 26 students in your class arrive to your movie premiere, each person has their photo taken 7 times on the red carpet. How many photos of your class were taken in total?



$$26 \times 7 = 182 \text{ pictures}$$

4. Your teacher had 5 photographers take his picture. Each photographer took 23 photos of him. Your principal had 7 photographers take her picture. Each photographer took 19 pictures of her. Who had more pictures taken of them your teacher or your principal?



$$\text{Teacher } 5 \times 23 = 115$$

$$\text{Principal } 7 \times 19 = 133$$

Principal had more pictures taken.

3. Peter Paparazzi loves to take photos of celebrities. If he has space on his camera to take 200 pictures, can he take 5 pictures of each of the 24 celebrities who attend your premiere?

$$5 \times 24 = 120$$

Yes, Pete can take the photos he wants.



Name: **Answer Key**

Date: **Day 3**

Brief Constructed Response

You have to rent a carpet for 5 hours. You have \$200 to spend.



Diamond Encrusted
Red Carpet
\$85 per hour

Plush Velvet
Red Carpet
\$36 per hour

Plastic
Red Carpet
\$24 per hour

Part A

Which of the red carpets above could you choose?

Either Plush Velvet Red Carpet or Plastic Red Carpet

Part B

Use what you know about multiplication to explain why your answer is correct. Use numbers and/or words in your explanation.

You could rent either the plush velvet red carpet or plastic red carpet because both cost less than \$200.

Students could show work using draw it method, box method or decomposition method.